

## WEST

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L3: Entry 4 of 5

File: DWPI

Mar 15, 2001

DERWENT-ACC-NO: 1999-095976

DERWENT-WEEK: 200159

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**TITLE:** Scaling and flicker reduction system for displaying PC signals on television - has conditional scaling circuit which applies scaling factor to each pixel depending on pixel conditions, and adaptive flicker reduction circuit which uses two dimensional window around pixel to select flicker filter

INVENTOR: KE, L; LUTZ, J M

PATENT-ASSIGNEE:

| ASSIGNEE         | CODE  |
|------------------|-------|
| CIRRUS LOGIC INC | CIRRN |

PRIORITY-DATA: 1997US-0886113 (June 30, 1997), 1999US 035152 (July 12, 1999)

PATENT-FAMILY:

| PUB-NO          | PUB-DATE         | LANGUAGE | PAGES | MAIN-IPC   |
|-----------------|------------------|----------|-------|------------|
| KR 2001020520 A | March 15, 2001   |          | 000   | G09G001/16 |
| WO 9900785 A1   | January 7, 1999  | E        | 044   | G09G001/16 |
| AU 9885674 A    | January 19, 1999 |          | 000   |            |
| US 5963262 A    | October 5, 1999  |          | 000   | H04N007/01 |
| EP 1016060 A1   | July 5, 2000     | E        | 000   | G09G001/16 |
| US 6094226 A    | July 25, 2000    |          | 000   | H04N007/01 |

DESIGNATED-STATES: AL AU BA BB BR CA CN CU CZ EE GE GH GM IW HU ID IL IS JP KE KP KR LC LK LR LS LT LV MG MK MN MW MX NO NZ PI RO SD SG SI SK SL TR TT UG VN YU ZW AT BE CH CY DE DK EA ES FI FI GB GR IE IT LU MC NL PT SE DE FR GB IE IT NL

APPLICATION-DATA:

| PUB-NO        | APPL-DATE         | APPL-NO        | DESCRIPTOR |
|---------------|-------------------|----------------|------------|
| KR2001020520A | December 24, 1999 | 1999KR-0712311 |            |
| WO 9900785A1  | June 18, 1998     | 1998WO-US12816 |            |
| AU 9885674A   | June 18, 1998     | 1998AU-0085674 |            |
| AU 9885674A   |                   | WO 9900785     | Based on   |
| US 5963262A   | June 30, 1997     | 1997US-0886113 |            |
| EP 1016060A1  | June 18, 1998     | 1998EP-0936808 |            |
| EP 1016060A1  | June 18, 1998     | 1998WO-US12816 |            |
| EP 1016060A1  |                   | WO 9900785     | Based on   |
| US 6094226A   | June 30, 1997     | 1997US-0886113 | Cont'd     |
| US 6094226A   | July 12, 1999     | 1999US-0351552 |            |
| US 6094226A   |                   | US 5963262     | Cont'd     |

INT-CL (IPC): G09 G 1/16; H04 N 7/01

ABSTRACTED-PUB-NO: US 5963262A

BASIC-ABSTRACT:

The scaling and flicker reduction system for conversion of non-interlaced images to a different resolution interlaced format includes conditional scaling circuitry which conditionally applies a scaling factor to each pixel within an image dependent upon pixel conditions including each pixel. An adaptive flicker reduction circuit receives scaled image data from the scaling circuitry and uses a two-dimensional window around each pixel within the scaled image data to select one of several flicker reduction filters for each pixel depending upon pixel conditions within the two-dimensional window.

The filter receives data which represents pixel values from at least two lines of an image. The filter provides at least two frequency responses.

ADVANTAGE - Allows scaling of images from one resolution to another without needing large silicon area. Improves handling of flicker in mixed images with text, graphics and continuous tone signals. Takes into account horizontal as well as vertical pixel conditions.

ABSTRACTED-PUB-NO:

US 6094226A

EQUIVALENT-ABSTRACTS:

The scaling and flicker reduction system for conversion of non-interlaced images to a different resolution interlaced format includes conditional scaling circuitry which conditionally applies a scaling factor to each pixel within an image dependent upon pixel conditions including each pixel. An adaptive flicker reduction circuit receives scaled image data from the scaling circuitry and uses a two-dimensional window around each pixel within the scaled image data to select one of several flicker reduction filters for each pixel depending upon pixel conditions within the two-dimensional window.

The filter receives data which represents pixel values from at least two lines of an image. The filter provides at least two frequency responses.

ADVANTAGE - Allows scaling of images from one resolution to another without needing large silicon area. Improves handling of flicker in mixed images with text, graphics and continuous tone signals. Takes into account horizontal as well as vertical pixel conditions.

The scaling and flicker reduction system for conversion of non-interlaced images to a different resolution interlaced format includes conditional scaling circuitry which conditionally applies a scaling factor to each pixel within an image dependent upon pixel conditions including each pixel. An adaptive flicker reduction circuit receives scaled image data from the scaling circuitry and uses a two-dimensional window around each pixel within the scaled image data to select one of several flicker reduction filters for each pixel depending upon pixel conditions within the two-dimensional window.

The filter receives data which represents pixel values from at least two lines of an image. The filter provides at least two frequency responses.

ADVANTAGE - Allows scaling of images from one resolution to another without needing large silicon area. Improves handling of flicker in mixed images with text, graphics and continuous tone signals. Takes into account horizontal as well as vertical pixel conditions.

WO 9900785A

CHOSEN-DRAWING: Dwg.1B/6

TITLE-TERMS: SCALE FLICKER REDUCE SYSTEM DISPLAY SIGNAL TELEVISION CONDITION SCALE CIRCUIT APPLY SCALE FACTOR PIXEL DEPEND PIXEL CONDITION ADAPT FLICKER REDUCE CIRCUIT TWO DIMENSION WINDOW PIXEL SELECT FLICKER FILTER

DERWENT-CLASS: P85 T04 W03

EPI-CODES: T04-H03; W03-A04H; W03-A11A; W03-A18C;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1999-069748

## WEST

  

L3: Entry 2 of 5

File: EPAB

Jan 7, 1999

PUB-NO: WO009900785A1

DOCUMENT-IDENTIFIER: WO 9900785 A1

TITLE: SYSTEM AND METHOD FOR CONVERSION OF PROGRESSIVE SCANNED IMAGES TO TELEVISION INPUT FORMATS

PUBN-DATE: January 7, 1999

## INVENTOR-INFORMATION:

| NAME            | COUNTRY |
|-----------------|---------|
| KE, LIGANG      |         |
| LUTZ, JUERGEN M |         |

## ASSIGNEE-INFORMATION:

| NAME             | COUNTRY |
|------------------|---------|
| CIRRUS LOGIC INC | US      |

APPL-NO: US09812816

APPL-DATE: June 18, 1998

PRIORITY-DATA: US88611397A (June 27, 1997)

INT-CL (IPC): G09 G 1/16

EUR-CL (EPC): G09G005/04; H04N009/64

## ABSTRACT:

A system and method for conversion of graphics from computer graphics formats to television formats are disclosed. More particularly, an improved scaling and flicker reduction system and method are disclosed for scaling personal computer (PC) graphics formats into different resolution television (TV) formats and for reducing flicker due to the conversion process of interlacing non-interlaced PC graphics to match interlaced TV formats. The scaling implementation reduces line buffer requirements by using a conditional scaling technique for converting graphics from a PC resolution format to a TV resolution format. The flicker reduction implementation provides a two-dimensional adaptive filter that selects between multiple filters so that different parts of an image may have different flicker reduction and different levels of trade off between flicker reduction and resolution. The system and method disclosed are more generally applicable to converting images from one resolution to another and to reducing flicker in images converted from a non-interlaced format to an interlaced format.

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L3: Entry 1 of 5

File: JPAB

Nov 17, 1998

PUB-NO: JP410308926A

DOCUMENT-IDENTIFIER: JP 10308926 A

TITLE: COMPUTER SYSTEM

PUBN-DATE: November 17, 1998

## INVENTOR- INFORMATION:

|            |         |
|------------|---------|
| NAME       | COUNTRY |
| INO, TAKAO |         |

## ASSIGNEE- INFORMATION:

|              |         |
|--------------|---------|
| NAME         | COUNTRY |
| TOSHIBA CORP |         |

APPL-NO: JP09119833

APPL-DATE: May 9, 1997

INT-CL (IPC): H04 N 5/92; H04 N 5/85

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide a computer system that provides a reproduced image with high image quality without deteriorating image quality due to an encoder at DVD reproduction, in the computer system provided with the encoder that outputs a DVD reproduction image onto a television receiver.

SOLUTION: A selector 13 receives a digital RGB signal outputted from a graphic controller and an RGB signal via a scaling circuit 11 and a flicker filter 12 and selects either of them according to a control signal S and gives the selected signal to a format conversion circuit 14. The selector 13 selects the RGB signal outputted from the graphic controller and gives it to the format conversion circuit 14 when a reproduced image of a DVD is outputted to the television receiver in the full screen mode.

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## Search Results - Record(s) 1 through 9 of 9 returned.

1. Document ID: US 6300932 B1

L34: Entry 1 of 9

File: USPT

Oct 9, 2001

US-PAT-NO: 6300932

DOCUMENT-IDENTIFIER: US 6300932 B1

TITLE: Electrophoretic displays with luminescent particles and materials for making the same

|   |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |
|---|-----------------------|--------------------------|-----------------------|------------------------|--------------------------------|----------------------|---------------------------|---------------------------|-----------------------------|------------------------|---------------------|
| <a href="#">Full</a>                              | <a href="#">Title</a> | <a href="#">Citation</a> | <a href="#">Front</a> | <a href="#">Review</a> | <a href="#">Classification</a> | <a href="#">Date</a> | <a href="#">Reference</a> | <a href="#">Sequences</a> | <a href="#">Attachments</a> | <a href="#">Claims</a> | <a href="#">KWC</a> |
| <a href="#">Draw Desc</a>   <a href="#">Image</a> |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |

2. Document ID: US 6262706 B1

L34: Entry 2 of 9

File: USPT

Jul 17, 2001

US-PAT-NO: 6262706

DOCUMENT-IDENTIFIER: US 6262706 B1

TITLE: Retroreflective electrophoretic displays and materials for making the same

|   |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |
|---|-----------------------|--------------------------|-----------------------|------------------------|--------------------------------|----------------------|---------------------------|---------------------------|-----------------------------|------------------------|---------------------|
| <a href="#">Full</a>                              | <a href="#">Title</a> | <a href="#">Citation</a> | <a href="#">Front</a> | <a href="#">Review</a> | <a href="#">Classification</a> | <a href="#">Date</a> | <a href="#">Reference</a> | <a href="#">Sequences</a> | <a href="#">Attachments</a> | <a href="#">Claims</a> | <a href="#">KWC</a> |
| <a href="#">Draw Desc</a>   <a href="#">Image</a> |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |

3. Document ID: US 6249271 B1

L34: Entry 3 of 9

File: USPT

Jun 19, 2001

US-PAT-NO: 6249271

DOCUMENT-IDENTIFIER: US 6249271 B1

TITLE: Retroreflective electrophoretic displays and materials for making the same

|   |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |
|---|-----------------------|--------------------------|-----------------------|------------------------|--------------------------------|----------------------|---------------------------|---------------------------|-----------------------------|------------------------|---------------------|
| <a href="#">Full</a>                              | <a href="#">Title</a> | <a href="#">Citation</a> | <a href="#">Front</a> | <a href="#">Review</a> | <a href="#">Classification</a> | <a href="#">Date</a> | <a href="#">Reference</a> | <a href="#">Sequences</a> | <a href="#">Attachments</a> | <a href="#">Claims</a> | <a href="#">KWC</a> |
| <a href="#">Draw Desc</a>   <a href="#">Image</a> |                       |                          |                       |                        |                                |                      |                           |                           |                             |                        |                     |

4. Document ID: US 6120839 A

|   |  |        |            |
|---|--|--------|------------|
| <u>L30</u>                                      | L28 and (reset\$ near7 display\$)  | 16     | <u>L30</u> |
| <u>L29</u>                                      | L28 and (first near3 driv\$)   | 8      | <u>L29</u> |
| <u>L28</u>                                      | L24 and control\$ and prevent\$ and reset\$  | 92     | <u>L28</u> |
| <u>L27</u>                                      | L24 and (control\$ near9 (prohibit\$ near3 driv\$))  | 0      | <u>L27</u> |
| <u>L26</u>                                      | L24 and ((control\$ near9 restrain\$) same reset\$)  | 0      | <u>L26</u> |
| <u>L25</u>                                      | L24 and ((control\$ near9 prevent\$) same reset\$)   | 0      | <u>L25</u> |
| <u>L24</u>                                      | (e\$book or electronic book or portable display)   | 1167   | <u>L24</u> |
| <u>L23</u>                                      | L22 and (first near5 driv\$)   | 8      | <u>L23</u> |
| <u>L22</u>                                      | L12 and control\$ and prevent\$ and reset\$  | 27     | <u>L22</u> |
| <u>L21</u>                                      | L12 and ((control\$ near9 prevent\$) same reset\$)   | 0      | <u>L21</u> |
| <u>L20</u>                                      | L12 and ((control\$ near9 restrain\$) same reset\$)  | 0      | <u>L20</u> |
| <u>L19</u>                                      | L12 and ((control\$ near9 prohibit\$) same reset\$)  | 0      | <u>L19</u> |
| <u>L18</u>                                      | L12 and (control\$ near9 (prohibit\$ near3 driv\$))  | 0      | <u>L18</u> |
| <u>L17</u>                                      | L12 and (control\$ near9 (inhibit\$ near3 driv\$))   | 0      | <u>L17</u> |
| <i>DB=JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i> |  |        |            |
| <u>L16</u>                                      | L13 and driv\$ and power   | 0      | <u>L16</u> |
| <u>L15</u>                                      | L13 and driv\$ and power and read\$ and write and control\$  | 0      | <u>L15</u> |
| <u>L14</u>                                      | L13 and driv\$ and power and read and write and control\$ and reset\$  | 0      | <u>L14</u> |
| <u>L13</u>                                      | (e-book or electronic book or portable display or micro\$display) and 345/\$.ccls.                           | 11     | <u>L13</u> |
| <i>DB=USPT; PLUR=YES; OP=ADJ</i>                |  |        |            |
| <u>L12</u>                                      | (e-book or electronic book or portable display or micro\$display) and 345/\$.ccls.                           | 260    | <u>L12</u> |
| <u>L11</u>                                      | L10 and lcd  | 5      | <u>L11</u> |
| <u>L10</u>                                      | L9 and power and (control\$ same reset\$)  | 13     | <u>L10</u> |
| <u>L9</u>                                       | L8 and (first near4 driv\$) and (second near4 driv\$)  | 105    | <u>L9</u>  |
| <u>L8</u>                                       | (e-book or electronic book or palm\$top or organiz\$ or portable display or micro\$display) and 345/\$.ccls. | 5201   | <u>L8</u>  |
| <u>L7</u>                                       | (e-book or electronic book or palm\$top or organiz\$ or portable display or micro\$display)                  | 108827 | <u>L7</u>  |
| <u>L6</u>                                       | L4 and (inhibit\$ near9 driv\$)  | 1      | <u>L6</u>  |
| <u>L5</u>                                       | L4 and (prevent\$ near7 driv\$)  | 0      | <u>L5</u>  |
| <u>L4</u>                                       | L3 and (power same driv\$) and (control\$ near20 reset\$)  | 31     | <u>L4</u>  |
| <u>L3</u>                                       | L2 and driv\$ near9 read\$   | 147    | <u>L3</u>  |
| <u>L2</u>                                       | L1 and driv\$ near9 writ\$   | 216    | <u>L2</u>  |
| <u>L1</u>                                       | (e-book or electronic book or information display) and (information near8 stor\$)                            | 5329   | <u>L1</u>  |



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Legal Date: 09-12-2002

| No. | Doccode | Number of pages |
|-----|---------|-----------------|
| 1   | A...    | 1               |
| 2   | CLM     | 4               |
| 3   | REM     | 10              |
| 4   | XT/     | 2               |
| 5   | LET.    | 1               |

Total number of pages: 18

Remarks:

Order of re-scan issued on .....